

IN THE UNITED STATES DISTRICT COURT
FOR THE DISTRICT OF DELAWARE

AMPEX CORPORATION,

Plaintiff,

v.

EASTMAN KODAK COMPANY,
ALTEK CORPORATION and CHINON
INDUSTRIES, INC.,

Defendants.

C.A. No. 04-1373-KAJ

REDACTED

APPENDIX TO DEFENDANTS' ANSWERING BRIEF IN OPPOSITION
TO PLAINTIFF'S MOTION FOR PARTIAL SUMMARY JUDGMENT
THAT U.S. PATENT NO. 4,821,121 IS NOT ANTICIPATED

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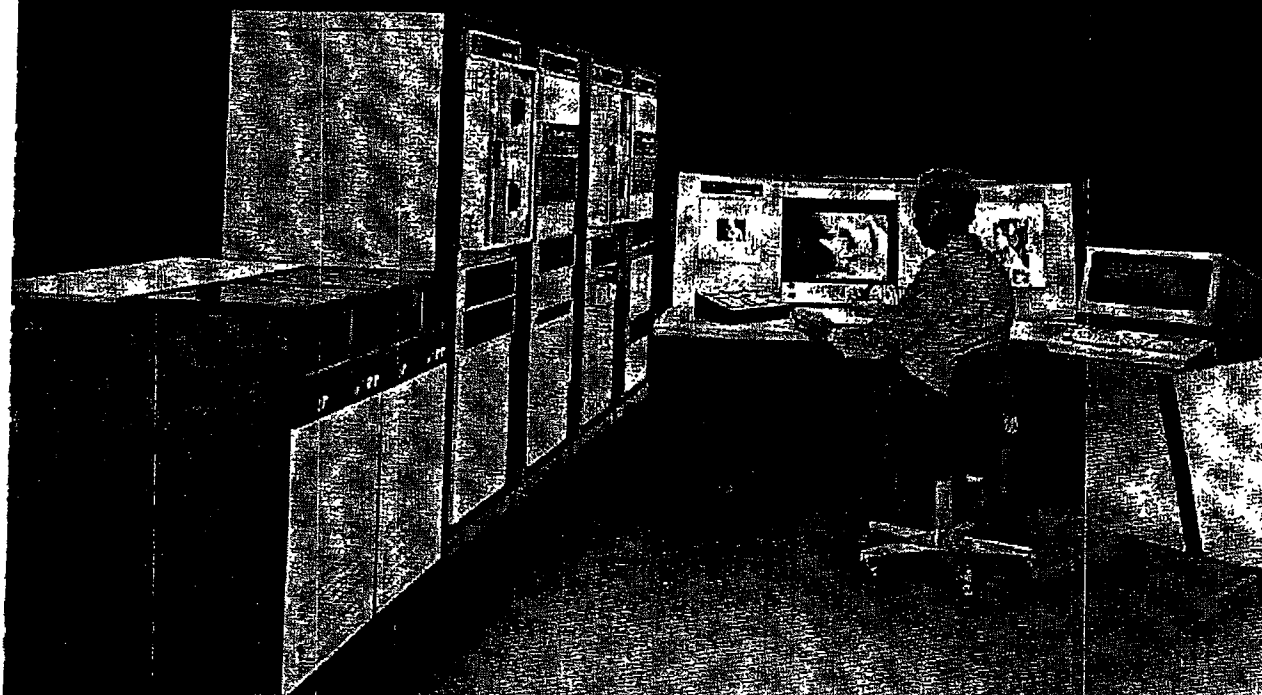
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RESPONSE 300



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SCI-TEX

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BENNIS, H. KALSER

10-7-01-0108

INTRODUCTION

The Sci-Tex RESPONSE 300 is a family of computer systems for electronic preparation of quality color printing.

It constitutes the nucleus of a total system, covering the entire preparatory, or pre-press, process from submitted art to press-ready plates or cylinders.

The RESPONSE 300 speeds-up and streamlines the traditional activities of —

- Color separation

- Photography, screening and contacting

- Retouching [e.g. dot-etching]

- Stripping ["montage"]—including page assembly, plate assembly, etc.

- Proofing

- Plate and cylinder exposure

Through a single highly efficient, convenient and largely automatic electronic process. Besides immediate economic advantages, it offers the printer or the preparation shop improved product quality and a turn-around time that is a fraction of what is considered standard.

The basic system of the family, for use in offset lithography, direct gravure, letterpress and flexography converts submitted artwork—color transparencies, opaques, line-art, galley-proofs, etc.—directly into fully assembled final film sets, ready for plate- or cylinder burn-in. The films contain multipage assembled separation images of linework and text and of masked, color-corrected and -balanced pictures, all screened and in perfect registration. They may be any size up to DIN A1 [American D]. Options to the basic system adapt it to other gravure preparation processes and further expand its scope and productivity.

BASIC FUNCTIONS

Submitted artwork—color transparencies, color- and monochrome opaques, and line art [including keyline and galley-proof—whether separate or pasted-up—as well as overlays and masks] are scanned in an electronic color scanner and thereby digitized. The scanner may be a standard color separation model. With most models, a single scan may be sufficient for all separations. All the digitized images are stored electronically and are reproduced only when a proof or a final film is requested. However any image—whether of a picture, a linework element or a page [at any stage of assembly] can be displayed at any time on the large color TV screen of the processing console. Moreover, the displayed image changes instantly in response to each processing action taken by the operator, thus allowing immediate visualization of its effect. Color pictures and tints are displayed in the true colors in which the final print will appear [with any given ink and stock, following an easy one-time color matching procedure]. Portions of the image can be magnified in the display to allow observation of details.

Mainly two categories of processing operations are provided—one is largely the equivalent of conventional retouching [or "dot-etching"] and the other—that of "stripping" [or montage or assembly]. However, unlike conventional operation, the two categories can be undertaken at any sequence and intermixed. This allows, for example, color-balancing and -matching between several pictures on a page or between pictures and tint areas. Of even greater advantage, is the immediate "response" of the displayed image to any change—allowing easy visualization of full color effect of each change and a step-by-step increase, as well as decrease, of such effect. This simplifies planning, avoids guess-work and enables immediate correction of mistakes; in fact, the necessity for working-proofs is reduced, if not eliminated, since operator always sees up-to-date "soft" color proof.

The "retouching" category includes the following operations: Recorrection of gradation and of color—over entire picture or over mask-defined ["staged"] area; local correction [as with a retouch brush] and [shading as with an air-brush]—in primary or any selectable color; artificial gradient and blending effects. Gradation curves and other pertinent data are displayable and there is provision for easy measurement of density or dot-percentage at any point. The ability, designed into the Console, to display the exact colors that will be printed with specific inks and stock is invaluable in this electronic retouching operation.

"Stripping" operations available on the system include: Masking of pictures and of linework; joining linework elements; filling outlines; creating tints [equivalent of stripping-in tint screens]; creating geometric elements and masks; over- and under-sizing linework [including selective overlap]; silhouette-tracing; manual correction of linework; picture juxtaposition ["ghosting"]; mask-controlled picture combination; cropping, re-scaling and rotating pictures; placing of pictures and of linework elements [including blocks of type] on page or over keyline. Note that since the image of each element is handled as a single full-color entity [rather than in sets of color-separations], the operator need

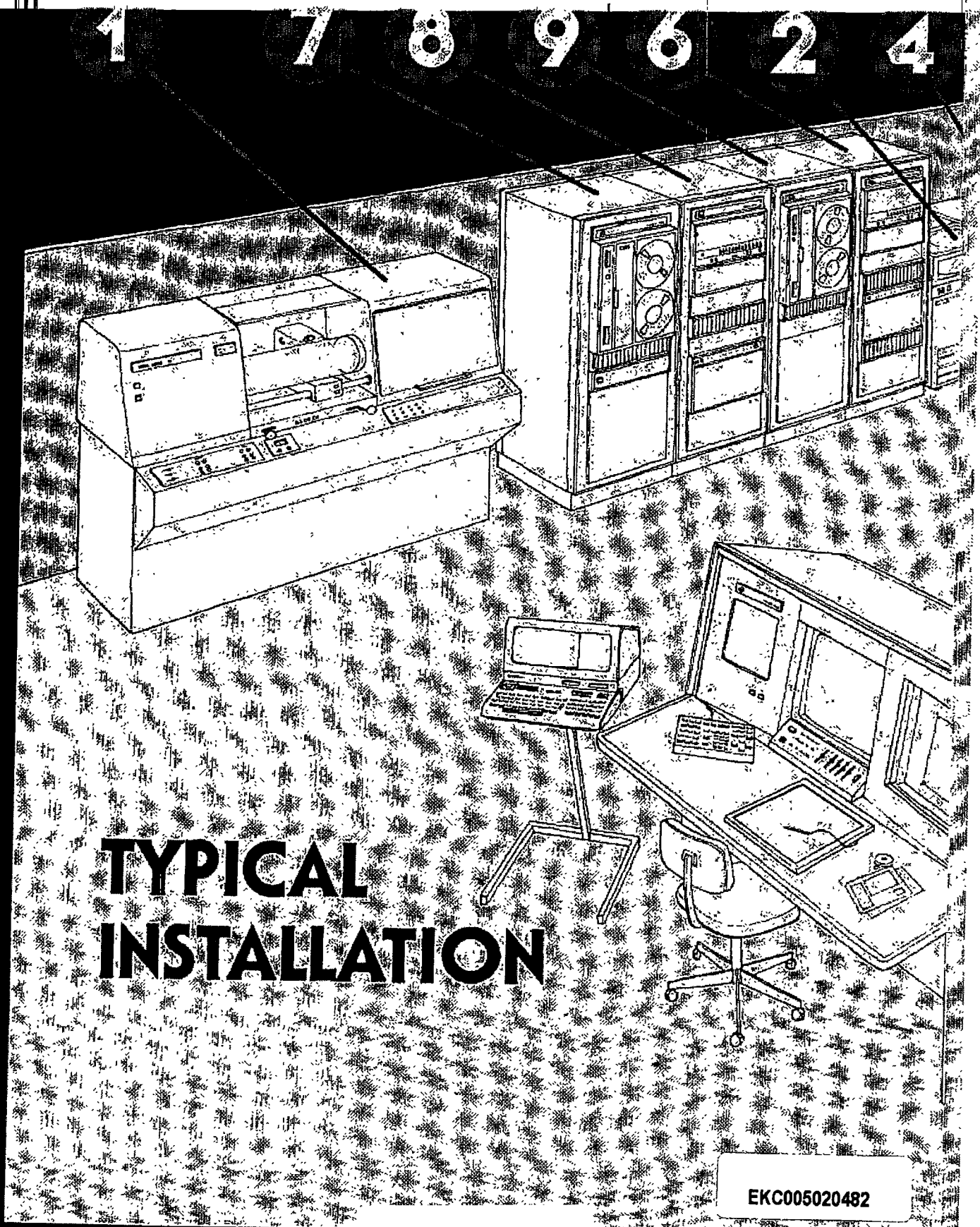
not be concerned about inter-separation registration. Additional processing operations available include: Plate assembly [e.g., page imposition, step-and-repeat imaging]; placing of marginal [e.g., registration-] marks and print-guides; generation of UPC symbols; storage and recall of recurring elements [e.g., logos and headings], of partial assemblies [for entering last-minute information] and of complete assemblies [for updating repeat jobs]. For flexography the image can be anamorphically scaled to any desired ratio.

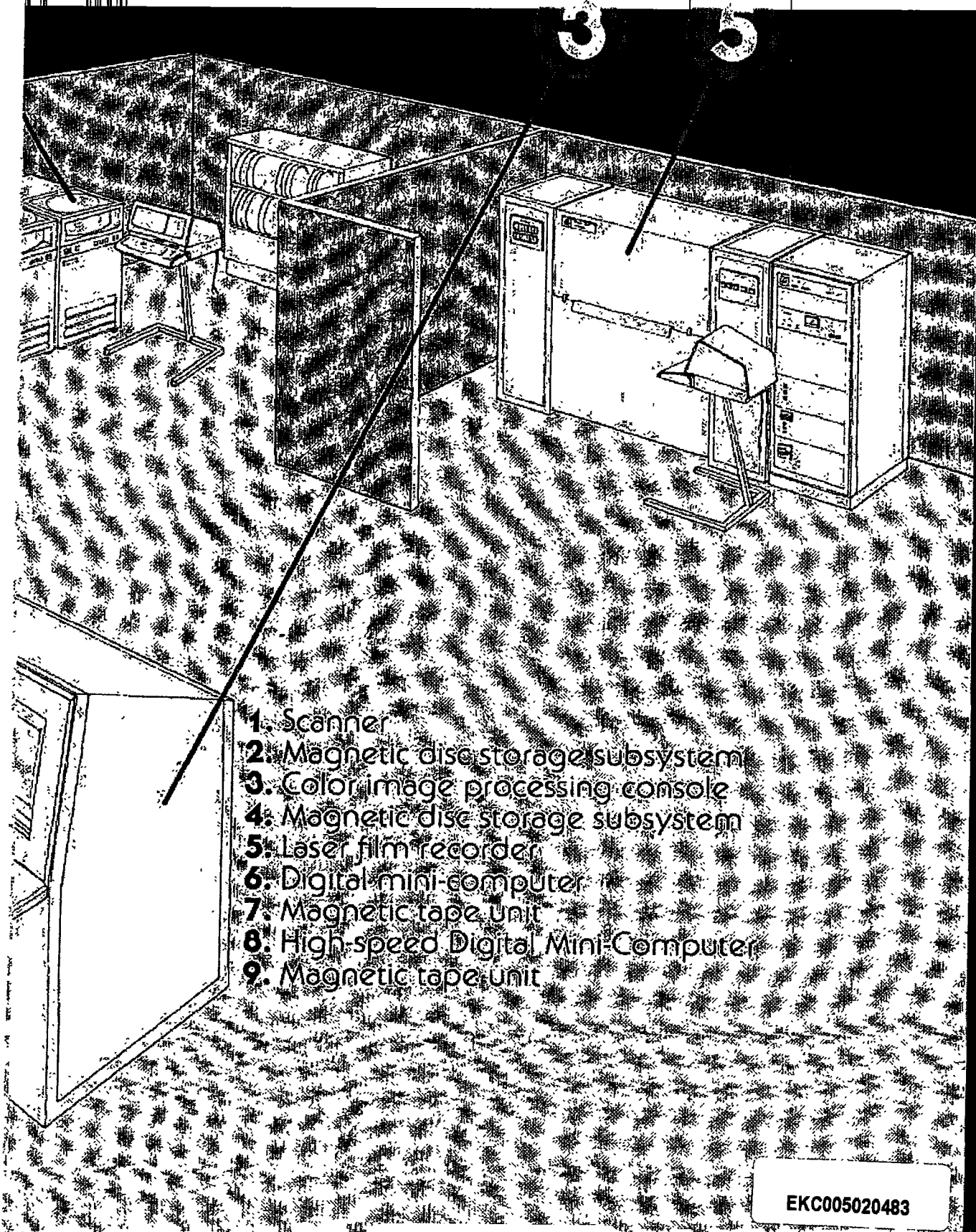
At the end of processing, after the operator or supervisor is satisfied with the "soft-proof" of each page on the color TV display screen, final image output is immediately available. A lithographic film mounted on the drum of the special R-300 Laser film recorder is automatically exposed to one separation of the entire plate image. Thus for each color a single flat film is produced in one pass, containing a multipage image of the exact composite of all linework, masks, straight and reverse type, tints and pictures. The latter two are produced screened at the exact desired mesh and angle, with quasi-hard dots of any shape. These films, which may be positive or negative, right or wrong reading, are ready for contact-copying ["burn-in"] onto plates or cylinders, using current methods.

If during image processing a hard proof is desired, a set of films of appropriate size can be produced in much the same way as the final films. For example, to produce color proofs of the corrected and retouched pictures, the R-300 can be made to assemble several such pictures and to produce them screened on the films [also possible: all four color separations of one page on one film]. These, in turn, are contacted onto conventional proofing materials. In the light of these proofs, further corrections can immediately be undertaken via the R-300. The processing console of the R-300 is provided with a built-in standard-illumination box for viewing proofs [as well as submitted art, layouts, etc.] and convenient comparison with the displayed image. For gravure work, there is a possibility of producing films for making offset press proofs that will emulate the colors obtained in gravure printing.

Owing to modularity and adaptability of the system, and owing to the ample digital storage provided, the scanning, processing and recording operations can be performed simultaneously and managed so as to optimize overall work flow under varying job loads and complexities.

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SYSTEM DESCRIPTION

The basic RESPONSE 300 system is described here with reference to the drawing of a typical installation.

Operation begins with the scanning-in of all submitted artwork, by means of the Scanner [1]. This can be any late-model color-separation scanner, of almost any make. Color pictures [transparencies and opaques] are scanned as usual. However, with most models only a single scan rather than one per color is necessary for any size of artwork. Linework, type and Monochrome pictures [including pre-separated color sets] are scanned in a similar manner. Operation of the scanner is controlled by a digital minicomputer [6].

The digital signals from the scanner are stored in a large-capacity Magnetic Disc Storage subsystem [2]. The data are identifiable by their source and by job number. They can be made directly available to the processing computer, or transferred to another disc pack subsystem or, for longer-term storage—to a magnetic tape [7]. The storage medium is a removable disc pack. A single disc pack can hold several pages of data. All image processing is carried out by a high speed digital mini-computer [8] conveniently controlled by an operator sitting at the Color Image Processing Console [3]. This human-engineered console contains a television Display Screen, flanked by a back-lit transparency viewing panel and a large 4800 degrees K illuminated copyboard [or "light box"]. The latter serves for viewing opaque art, proofs, layouts and mockups. The TV display screen itself is part of a high-quality color monitor, connected to a special digital image memory, and is capable of displaying any image stored on the disc in true color, including any corrections and assembly operations performed on it. In addition, the console contains a set of knobs and switches to directly control the display [e.g. select separations or full color], a set of push-buttons to initiate specific processing functions or to enter numerical values, and

an electronic stylus which serves as the operator's main graphic tool. Also included with the console is an alphanumeric terminal, which serves as the master control device.

The processed data, i.e. the final image to be produced on film, is stored on another magnetic disc subsystem [4]. These data, again, can be transferred to and from magnetic tape [9] for longer term storage [e.g. from shift to shift, or pending a last-minute addition]. For short-term storage also a disc pack can be removed and kept on shelf. The image data from the disc subsystem are directly transferable to the Laser film recorder [5]. The latter is a high-precision, high-resolution large-format electronic camera that converts stored digital data into a full multi-page print-ready image on lithographic film. The image will contain all graphic elements—line, type, tints and picture separations, the latter—screened at specified mesh and angle. Operation of the Laser film recorder is under control of the operator via a computer and an alphanumeric terminal.

The alphanumeric terminal associated with each major component of the system [Scanner, Console and Plotter] serves as the communication medium between the operator and the respective computer. The operator types instructions and parameters on the keyboard, and the computer displays messages and questions on the terminal CRT screen. This interchange is carried out as a dialog in plain language. The dialog leads the operator through the required steps—to enter the appropriate information or to operate the rest of the equipment. Thus the operators need not be skilled computer attendants, but rather craftsmen versed in scanning, retouching or stripping operations, and their additional training could be completed in several weeks.

SYSTEM FLEXIBILITY

The RESPONSE 300 system is modular and designed to be adapted to a wide range of print preparation methods, work loads and particular shop requirements. The system has growth ability—in terms of both increased productivity, and of incorporation of newer equipment [also from other manufacturers].

Present options include the capabilities of interfacing with gravure engraving machines [like the Helio-Klischograph], with laser exposing machines for offset plates or with laser engravers of flexo plates. An alternative option is to record disc packs or magnetic tapes in formats suitable as input to digital engraving or exposing systems.

Other options include modified versions of the laser plotter—to produce contone films or to directly expose offset plates, and the capability of accepting digital

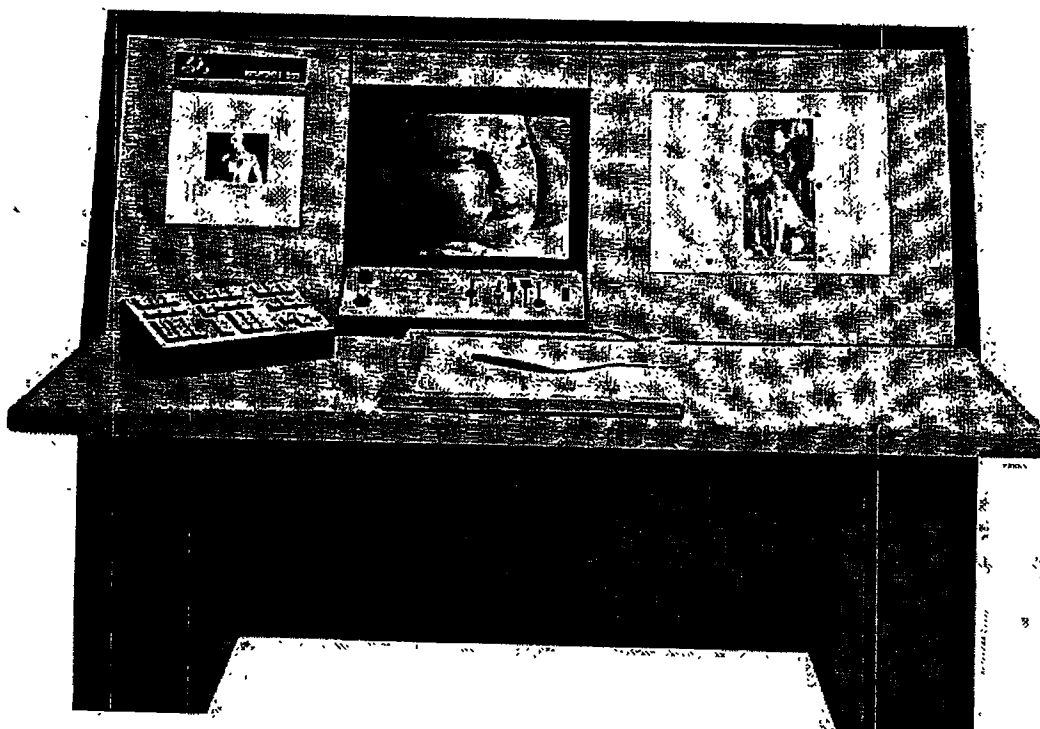
composed text [on tape or floppy disc] to be electronically typeset by the system. Productivity can be increased by an unlimited increase in the number of independent processing stations, laser plotters or input scanners, as well as of storage disc drives.

Non-obsolescence is assured by the use of a powerful general-purpose computer as the nucleus of each work station. Practically all processing features reside in the software supplied by Sci-Tex, and that will be continuously updated, as further field experience is gained and as newer applications are brought to bear.

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HIGHLIGHTS

- A total computerized commercial-quality color pre-press system.
- All-electronic image processing from artwork to plate.
- Handles process color, linework and set type.
- Incorporates color separation, retouching, screening, stripping, pagination and proofing in an integrated highly efficient and productive process.
- Usable for most classes of products—e.g. periodicals, catalogs, packages and general commercial.
- Applicable to most printing methods—offset, letterpress, flexo and direct-transfer gravure; options for other gravure methods.
- Beneficial in almost any type of job, especially where critical color work, complex masking and assembly, mixed pages and fast or frequent changes are involved.



BENEFITS

- Direct economic advantages due to —
 - Enhancement of productivity of photographers, scanner operators, retouchers, strippers and engravers.
 - Elimination of all contacting and most camera work.
 - Elimination of all intermediate consumables [films, screens, acetates, etc.].
 - Continuous soft-proof, reducing requirements for intermediate hard-proofs and increasing chances of good plates first time around.
- Better utilization of existing color separation scanners.
- Higher product quality.
- Short turn-around time.
- Capability of easily tackling demanding jobs [critical color, complex stripping, etc.].
- Pleasant working conditions.
- Assurance of compatibility with other present and future electronic equipment.

FEATURES

- Scanning by almost any late-model color-separation scanner.
- Any artwork on flexible medium—color or monochrome, transparent or opaque [depending on scanner].
- Color-Screen Display [soft proof] of pictures and of whole assembly in true print colors.
- Convenient comparison of displayed image with originals and with proofs.
- Immediate and continuous visualization on color screen of all correction and assembly operations, thus providing truly interactive processing.
- Post scan correction of color and gradation within masks or globally.
 - Completely specifiable and displayable gradation curves.
 - Color recorection for new inks.
 - Selective color correction for any number of colors.
 - Color shifting by controlled amounts.
 - Equalizing colors of same object in different originals.
- Local additive and subtractive picture retouching ["dot etching"] in primary or other correction colors.
 - Controlled increase and reduction of densities in specifiable spot sizes.
 - Air-brush effects.
- Fast microdensitometry.
- Post scan picture cropping, scaling and rotation.
 - Applicable to single pictures as well as to picture assemblies and, automatically, to their masks.
- Easy silhouette drawing [outlining] and mask production.
- Fast processing of linework and masks, including over- and undersizing, selective overlap, filling, opaquing and producing reverses and tints.
- Automatic generation of geometric linework- and mask elements.
- Automatic generation of tint gradients.
- Fast complex picture/mask/linework/tint assembly ["stripping"]
- Very fast block page assembly ["square set"]
- Fast signature assembly—page imposition
- Storage and retrieval of standard symbols and recurring elements.
- Fast updating of assembled page.
- Partially or completely processed pages stored in disc packs—8 to 32 color pages per disc pack.
- Archival page storage on magnetic tapes, 2-8 color pages per reel.
- Electronic half-tone screening in selectable mesh and angle [including conventional values].
- Laser exposure of standard lith and line films.
- Large format output—up to size "A1" [American "D"], exposing multipage or multi-repeat assembled films.
- Resizing of assembled page or signature, including anamorphic scaling.
- System modularity enables adaptation to any production scheme and work load and allows gradual growth.
- System is connectable and conformable to other present and future electronic pre-press equipment from diverse manufacturers.



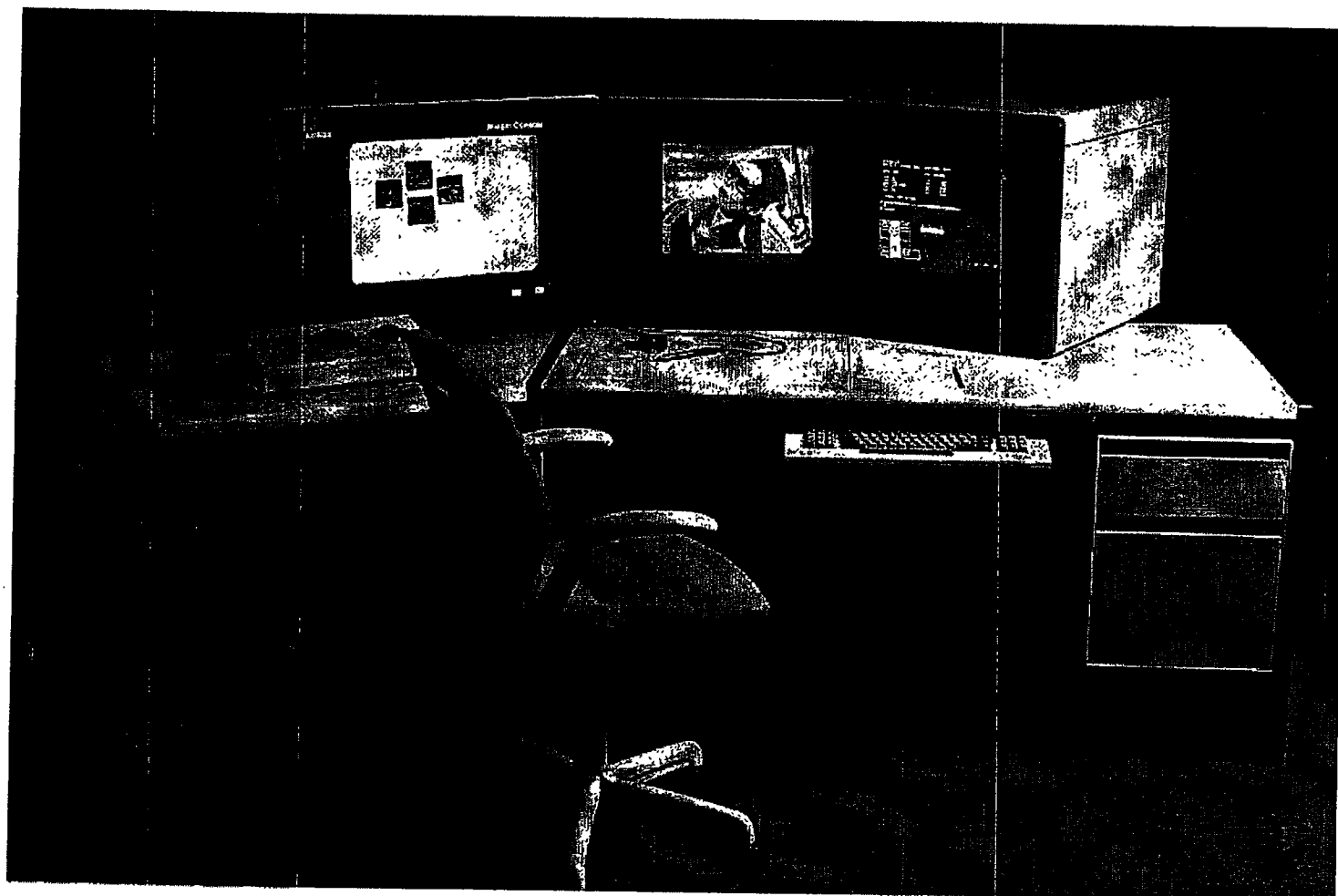
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The IMAGER Console



The IMAGER Console is designed around the operator, to put his capabilities where he can most easily find and use them without removing his attention from the job at hand. Because the purpose is to turn color images into plate-ready pages, not to turn trained graphic-arts craftsmen into computer scientists, Scitex has tailored the IMAGER Console controls for graphics in the same way an airplane cockpit is ergonomically customized for flight.

Included in the IMAGER Console

The color monitor

Centered at eye level on the IMAGER Console is a flicker-free high-resolution color video display showing the image or images being processed. Behind the color video screen seven extremely high-speed microcomputers process image data interactively to give the operator instantaneous response as he calls for various electronic tools and adjusts image size and color, rotates and moves

images, draws, creates shapes, crops and assembles graphics for a page.

The keypad

The operator's left hand controls a group of thirteen keys, easily managed by touch. The keys represent functions and choices closely related to the work at hand. Their meanings change whenever the operator signals for a new type of function, and a head-up video chart shows the operator the current key labels at every

moment. In this way, hundreds of image-processing tools are packed into a small keypad which the operator eventually uses at the speed of thought, without glancing at either the pad itself or its explanatory chart.

The trackball and dial

Also at the operator's left hand is an omnidirectional trackball, with which the operator can position a picture on screen, rolling it up or down, right or left, as if sliding a piece of film on a planning table.

To achieve the right trade-off between scope and detail in the displayed portion of the color image, the operator can adjust magnification at any time by turning a simple dial for a smooth continuous zoom in or out on any area. The same dial controls the image's angle; the operator can feel the dial and the image rotating together.

The digitizing tablet

While the operator's left hand controls the image's position and magnification, his right hand can draw or airbrush in full color. For these purposes the operator moves his hand across a digitizing tablet, holding an electronic stylus or crossline cursor.

The monochrome data monitor

A monochrome monitor, positioned alongside the color monitor, shows the current key labels for the operator's keypad and provides instant confirmation of function status. It also displays detailed system messages in large, readable letters, and supports a keyboard for the entry of alphanumeric information such as the names by which pictures and pages are called.

The monochrome monitor and keyboard can also function as a communications terminal for messages among operators and their supervisors. A front-end text composition system can be linked into this message network, and the IMAGER can function as a composition terminal using the TEXTA Typesetter.

Exclusive technology

A built-in autonomous display computer with seven extremely high-speed micro-computers, all designed and produced by Scitex especially for the IMAGER Console, provides the responsiveness that gives the operator the feeling of working with his own hands on flexible, movable images. A large, multi-layered micro-electronic memory accommodates several pictures at once for mutually independent manipulations during simultaneous display, letting the operator coordinate their positions and colors interactively.

The display processor's micro-computers, operating as parallel pipeline processors, perform high-speed computations for many functions. The operator senses the speed as fast turnaround time (for example, in undercolor removal), or as interactive response (for example, in rotation), or takes it for granted (for example, in calculations for proper color reproduction).

The high-resolution IMAGER Console video spans the entire gamut of colors for printing inks. At any time, it can show each ink layer separately, progressive combinations of inks, or complete four-color process pictures.

The man/machine interface embodies the latest in ergonomics, from the comfortable positioning of the monitors to the same trackball technology used in high-performance radar screens.

Imaging and page preparation

Image data and display

The Response computer processes images at the very detailed resolution necessary for high-quality color printing. The operator generally chooses to do most of his work at lower, more convenient levels of magnification, relying on the computer to replicate his work at full detail.

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The IMAGER Console's full-color display shows two major kinds of data: (a) process color for continuous-tone pictures, and (b) flat tints for line art, which includes text, rulings, logos, and other solid graphic elements. Up to 256 adjustable sets of color values can be used as tints.

Masks can be used in cropping pictures, or as borders for selective color correction or airbrushing. Being line-art images, they can be developed with computer-aided drawing and geometry at the digitizing tablet, either on the basis of a scanned original or from scratch. Masks can also be based on a special technique that isolates figures in an image by color characteristics.

Geometry is treated at a number of levels. The most minute level consists of pixels, often at 30 to 100 pixels per millimeter (750 to over 2500 per inch). The operator can also handle geometry in millimeters, inches, points, or picas. A further and especially convenient technique uses non-reproducing ("blue") lines.

A blue-line grid is an image showing guide-rulings that help in composing a particular type of page. The operator can construct such a grid by using the digitizer or by entering specifications numerically on the keypad. The thickness of a blue line is

infinitesimal: on screen, it is never wider than a point, and in print it does not reproduce. Any number of grids can be saved in the system's memory and re-used as standard formats.

Picture editing

The IMAGER Console can adjust a picture's gradation, color values, and everything else that a modern high-performance scanner adjusts. The change can cover the whole picture, or areas defined by a mask.

The full-color electronic airbrush can spray any color, in any width and intensity, wherever the operator moves his hand. Operators use it in adjusting colors and gradation, painting details out (or in), and airbrushing the borders of vignettes and inserts.

The system's multi-layer memory allows the operator to cancel any on-screen change and revert to the picture's previous version. The change is applied to the digital original only after explicit approval, and extra copies can be kept unchanged on disc or on magnetic tape.

Image assembly

For assembly, the operator summons data files from computer storage. Data may include a blue-line grid, masks, and ink/paper/press formulas as well as the graphics and text for reproduction.

Using a blue-line grid or mechanical, or a simple geometric outline, the operator calls image after image to the screen. Position, magnification, angle, and even last-minute cropping can be specified, numerically and/or with the trackball, keypad and dial.

The operator has a broad range of overlaps and underlaps (shrinks and spreads) available in software form with sophistication unrivalled by any photographic means. Any colors and priorities can be specified, including selective shrinks and spreads governed by the interaction of specific pairs of colors. This software is particularly helpful in protecting reverse type and similar effects from mishaps at presstime.

Configurations

The IMAGER Console is available with Scitex's other top graphics equipment in the Response Network line of configurations, from the basic Response-350 up to customized multi-workstation Networks with supervisory stations for job coordination and approval. The IMAGER Console is fully compatible with Scitex's other consoles, the CIPC and the LYNART, for economical teamwork in page preparation, and with the TEXTA Typesetter for integrated typesetting including last-minute additions and corrections on line.

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Components

Color monitor: 512 x 512 dots in interlaced raster mode
512 x 384 dots in flicker-free non-interlaced mode
60 fields/sec raster refresh
48 centimeters (19 inches) diagonal size

Monochrome monitor: Resolution, refresh, and size as above

Electronic tablet: 40 x 50 centimeters (16 x 20 inches)

Keypad: Thirteen dynamically defined function keys

Trackball

Dial

Alphanumeric keyboard

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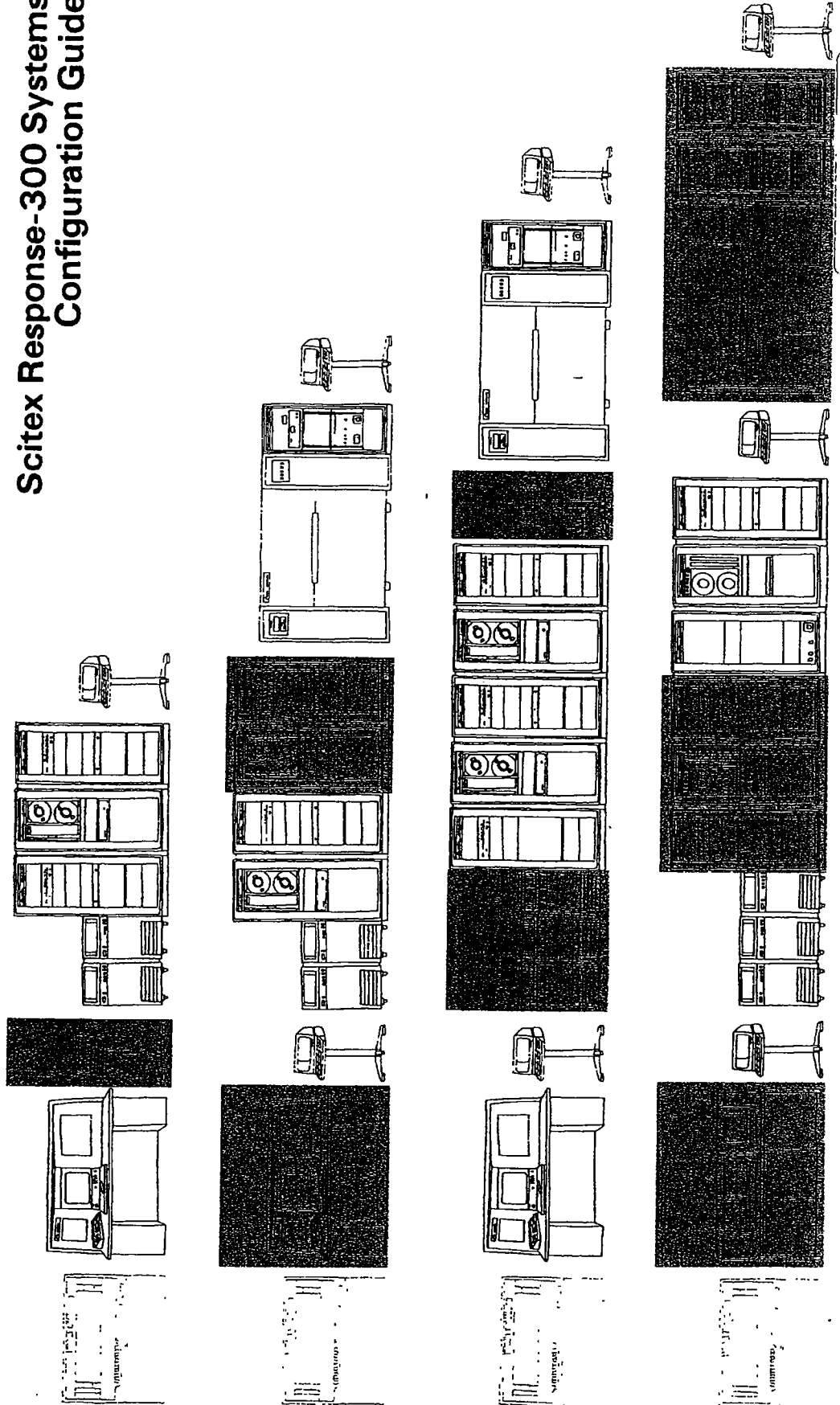
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EKC005020466



Building Blocks for Growth

Scitex Response-300 Systems Configuration Guide



EKC005021420

No two pre-press departments are the same. What's more, no successful pre-press department *remains* the same. Scitex will help you model a Response-300 system that fits your own particular needs and plans. This booklet shows typical Response-300 configurations which a pre-press department can start with or grow into. Each configuration is upward-compatible, so that as the volume and variety of your work increases, your system can be easily and profitably expanded. There are systems with two computers for simultaneous processes, *Studio* configurations with three computers, and *Network* configurations with any number of computers. No one has ever outgrown a Response system.

Not only does Scitex ensure that all its own equipment is compatible, so that a smoothly integrated system is simple to build to any size and orientation, Scitex also provides the widest compatibility with today's various lines of scanners and other pre-press equipment, making them more useful to you than they are already.

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The Response-310

The entry-level base for building two computers, with bidirectional scanner interface and Scitex's CIPC Console

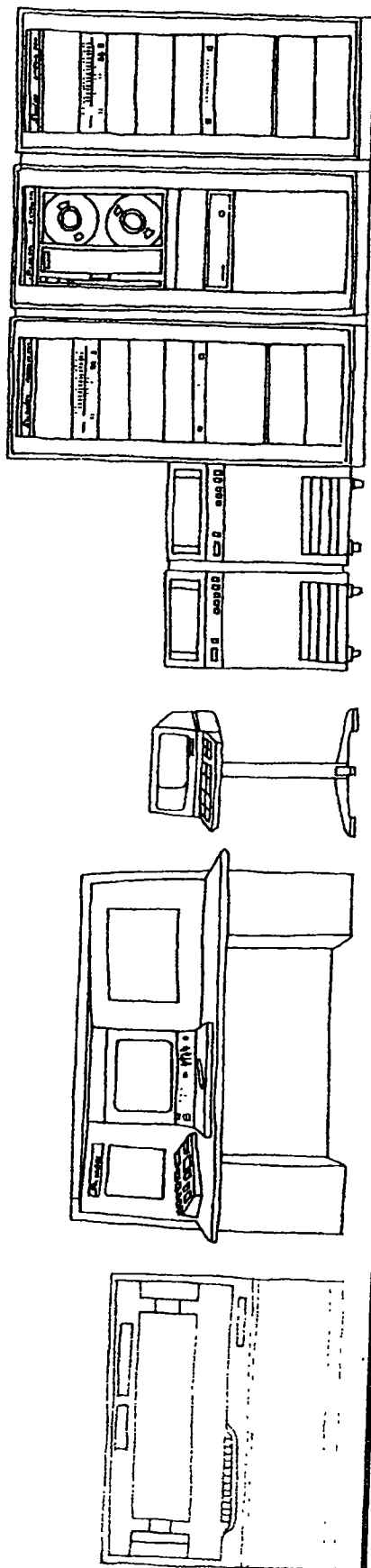


Image capture

- linkage to any of a wide variety of scanners
- enlargement of ganged images not limited by fit on scanner's output drum
- especially sharp scanning for mechanicals, text, and other linework
- reloading of images from archive of previous jobs, via magnetic tape

The Scitex CIPC Console

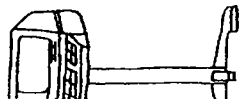
- scientific-quality display screen with 320x256 dots
- wide color gamut to represent practically all inks and papers
- flicker-free non-interlacing display
- pictures in full color, calibrated to ink/stock/press
- progressive display of separations at any time
- visual roaming in all directions
- zoom to any percentage magnification/reduction
- readout of dot percentages or density values
- display of tone reproduction graphs

Process-color operations

- instant local and global changes of color
- instant local and global changes of gradation
- versatile electronic airbrushing and dot-etching in full color
- automatic smoothing of color transitions as pictures are enlarged

Linework and flat tints

- tint generation by computer
- sophisticated overlap and underlap (shrinks and spreads)
- drawing or tracing in any line-width and color
- automatic filling of areas with any flat tint
- automatically-drawn geometric shapes and frames: rectangles, circles, ovals, etc
- creation of masks in the form of linework images



B-016

Page assembly

- on-line library of page grids and blue lines for rapid page assembly
- computer accuracy in fitting images to page grids and blue lines
- computer-aided drawing for creating masks on screen
- sophisticated automatic masking, isolating items by their color contrast
- cropping and scaling
- graded tints and other computer-generated backgrounds
- overlaying and ghosting of linework and process-color pictures
- positioning, rotation, and alignment of page components

Print specifications

- undercolor removal
- registration marks, trim marks, and printer guides
- computer-aided page imposition

Output on the scanner

- exposure of continuous-tone separations on the scanner
- halftone exposure on the scanner with contact screens
- electronic screening, optional for laser-equipped scanners

Work coordination

- image input or exposure simultaneous with console work
- mutual backup with two computers
- system command dialogue at alphanumeric terminals
- all data electronically accessible to all stations without hand-carrying
- magnetic discs for on-line memory, transfer, and short-term storage
- transfer and long-term storage on magnetic tape

The Response-320

Two computers, with Scitex's CIPC Console for preparation and the Scitex ELP Laser for high-resolution electronic screening and continuous-tone exposure

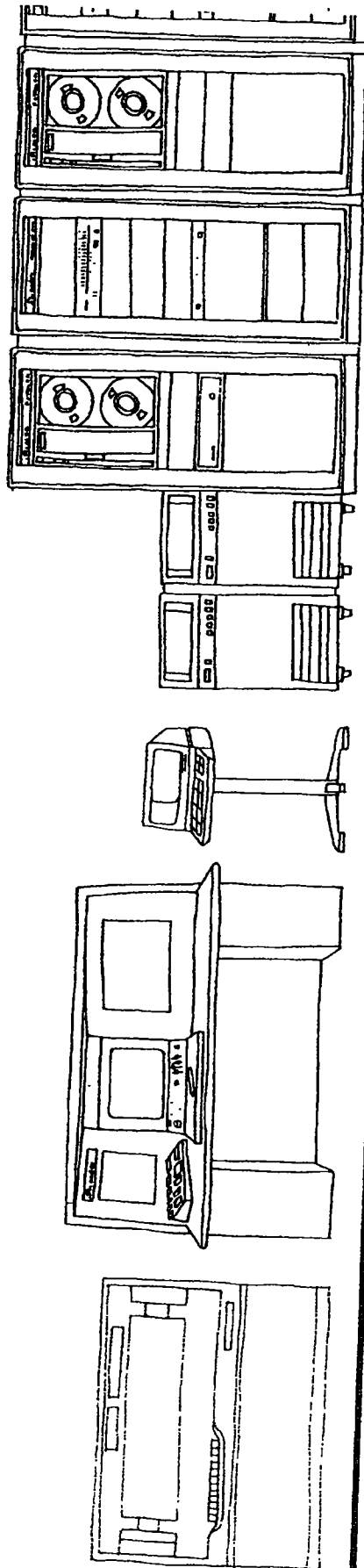


Image capture

- linkage to any of a wide variety of scanners
- image enlargement not limited by fit on scanner's output drum
- especially sharp scanning for mechanicals, text, and other linework
- reloading of images from archive of previous jobs, via magnetic tape

The Scitex CIPC Console

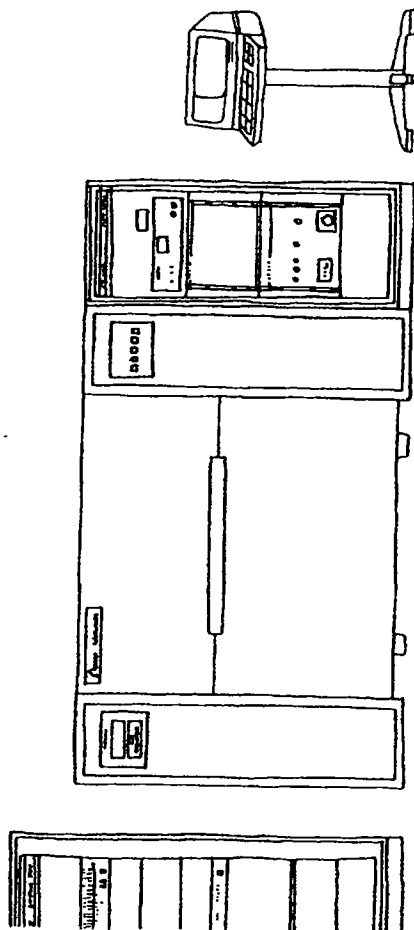
- scientific-quality display screen with 320x256 dots
- wide color gamut to represent practically all inks and papers
- flicker-free non-interlacing display
- pictures in full color, calibrated to ink/stock/press
- progressive display of separations at any time
- visual roaming in all directions
- zoom to any percentage magnification/reduction
- readout of dot percentages or density values
- display of tone reproduction graphs

Process-color operations

- instant local and global changes of color
- instant local and global changes of gradation
- versatile electronic airbrushing and dot-etching in full color
- automatic smoothing of color transitions as pictures are enlarged

Linework and flat tints

- tint generation by computer
- sophisticated overlap and underlap (shrinks and spreads)
- drawing or tracing in any line-width and color
- automatic filling of areas with any flat tint
- automatically-drawn geometric shapes and frames: rectangles, circles, ovals, etc.
- creation of masks in the form of linework images



Page assembly

- on-line library of page grids and blue lines for rapid page assembly
- computer accuracy in fitting images to page grids and blue lines
- computer-aided drawing for creating masks on screen
- sophisticated automatic masking, isolating items by their color contrast
- cropping and scaling
- graded tints and other computer-generated backgrounds
- overlaying and ghosting of linework and process-color pictures
- positioning, rotation, and alignment of page components

Print specifications

- undercolor removal
- registration marks, trim marks, and printer guides
- computer-aided page imposition

Output on the Scitex ELP Laser

- images up to 101 by 185 centimeters (40 by 73 inches)
- choice of any mesh at conventional screen angles
- unconventional screen angles available if desired
- electronically screened exposure on lith or rapid-access films
- square, round, elliptical, or pincushion screen-dots
- exposure directly onto special offset plates
- one to four separations exposed together
- unscreened exposures on continuous-tone films

Work coordination

- image input or exposure simultaneous with console work
- mutual backup with two computers
- system command dialogue at alphanumeric terminals
- all data electronically accessible to all stations without hand-carrying
- magnetic discs for on-line memory, transfer, and short-term storage
- transfer and long-term storage on magnetic tape

B-018

The Response-330

The basis for balanced Studio-level throughput: three complete work-stations for simultaneous computerized operations on the scanner, the Scitex CIPC Console, and the Scitex ELP Laser

(Scitex-1981)

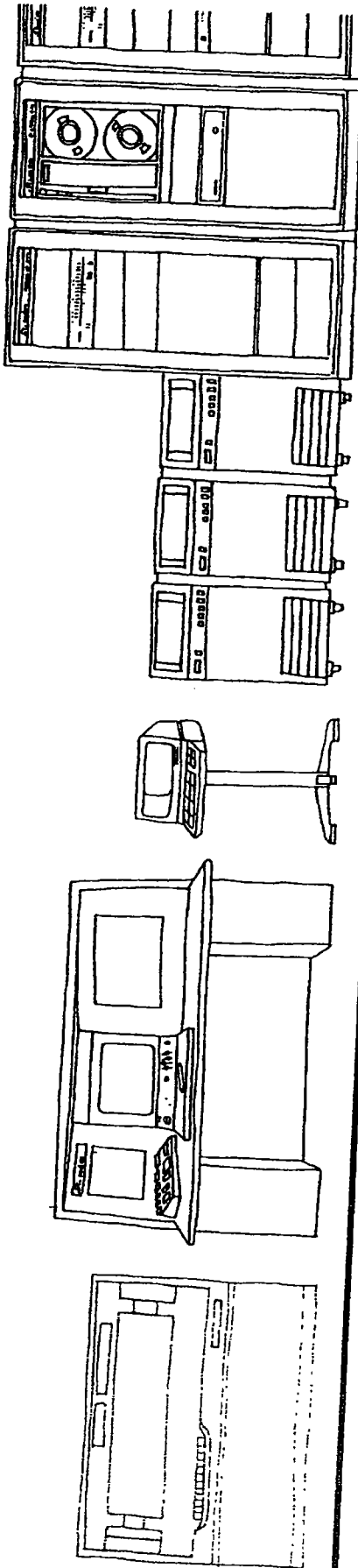


Image capture

- linkage to any of a wide variety of scanners
- image enlargement not limited by fit on scanner's output drum
- especially sharp scanning for mechanicals, text, and other linework
- reloading of images from archive of previous jobs, via magnetic tape

The Scitex CIPC Console

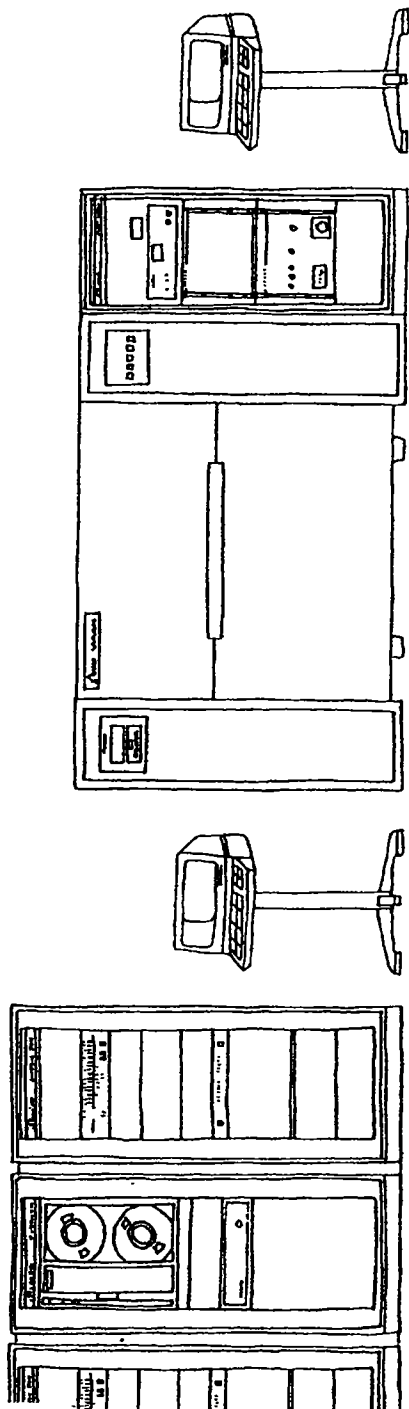
- scientific-quality display screen with 320x256 dots
- wide color gamut to represent practically all inks and papers
- flicker-free non-interfacing display
- pictures in full color, calibrated to ink/stock/press
- progressive display of separations at any time
- visual roaming in all directions
- zoom to any percentage magnification/reduction
- readout of dot percentages or density values
- display of tone reproduction graphs

Process-color operations

- instant local and global changes of color
- instant local and global changes of gradation
- versatile electronic airbrushing and dot-etching in full color
- automatic smoothing of color transitions as pictures are enlarged

Linework and flat tints

- tint generation by computer
- sophisticated overlap and underlap (shrinks and spreads)
- drawing or tracing in any line-width and color
- automatic filling of areas with any flat tint
- automatically-drawn geometric shapes and frames: rectangles, circles, ovals, etc.
- creation of masks in the form of linework images



Page assembly

- on-line library of page grids and blue lines for rapid page assembly
- computer accuracy in fitting images to page grids and blue lines
- computer-aided drawing for creating masks on screen
- sophisticated automatic masking, isolating items by their color contrast
- cropping and scaling
- graded tints and other computer-generated backgrounds
- overlaying and ghosting of linework and process-color pictures
- positioning, rotation, and alignment of page components

Print specifications

- undercolor removal
- registration marks, trim marks, and printer guides
- computer-aided page imposition

Output on the Scitex ELP Laser

- images up to 101 by 185 centimeters (40 by 73 inches)
- choice of any mesh at conventional screen angles
- unconventional screen angles available if desired
- electronically screened exposure on lith or rapid-access films
- square, round, elliptical, or pincushion screen-dots
- exposure directly onto special offset plates
- one to four separations exposed together
- unscreened exposures on continuous-tone films

Work coordination

- simultaneous triple-tasking, scanning, correction/page-assembly, and output
- flexible backup with three computers
- system command dialogue at alphanumeric terminals
- all data electronically accessible to all stations without hand-carrying
- magnetic discs for on-line memory transfer, and short-term storage
- transfer and long-term storage on magnetic tape

The Response-350

*The start of the Response Network line:
a new configuration introducing the advanced Scitex IMAGER
Console and ERAY Laser output unit*

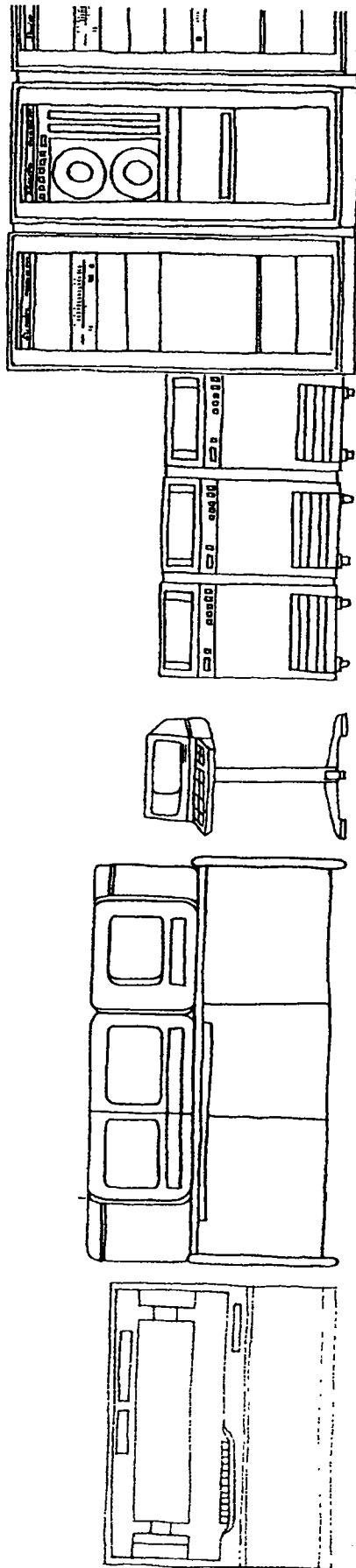


Image capture

- linkage to any of a wide variety of scanners
- image enlargement not limited by fit on scanner's output drum
- especially sharp scanning for mechanicals, text, and other linework
- reloading of images from archive of previous jobs, via magnetic tape

The Scitex IMAGER Console

- 512x384 dots for flicker-free non-interlaced display
- 512x512 dots for interlaced display (optional)
- quick picture-handling using seven high-speed on-line microcomputers
- eyes-on manipulations with trackball, zoom/rotate dial, and soft-key pad
- interactive zoom and roam movement for display purposes while you watch
- interactive sizing and rotation for rapid coordination of images
- simultaneous display of pictures overlaid for montage

- wide color gamut to represent practically all inks and papers

- pictures in full color, calibrated to ink/stock/press

- progressive display of separations at any time

- visual roaming in all directions

- zoom to any percentage magnification/reduction

- readout of dot percentages or density values

- display of tone reproduction graphs

Process-color operations

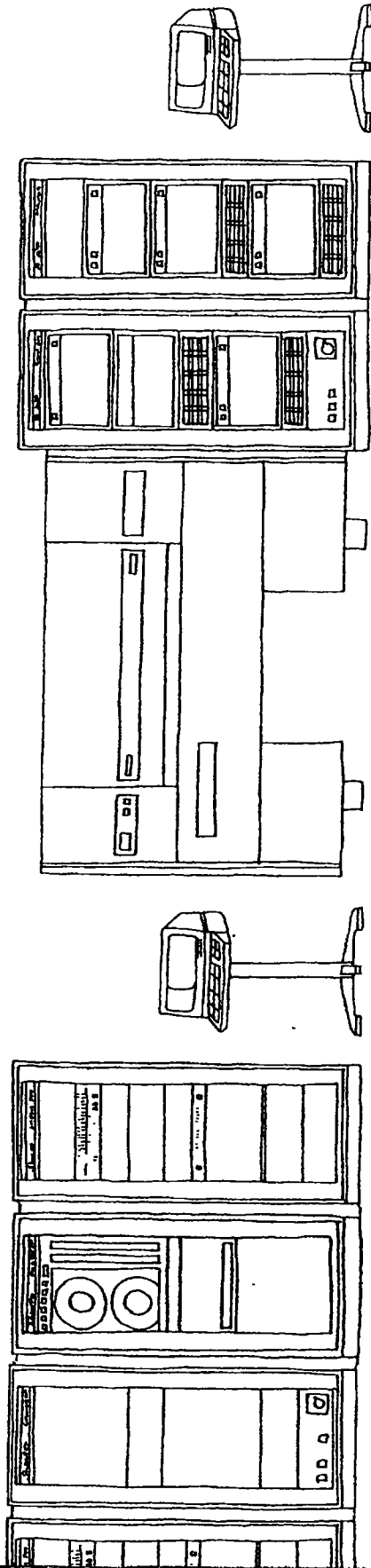
- instant color correction
- instant local and global changes of color gradation
- versatile electronic airbrushing and dot-etching in full color
- automatic smoothing of color transitions as pictures are enlarged

Linework and flat tints

- tint generation by computer
- sophisticated overlap and underlap (shrinks and spreads)
- drawing or tracing in any line-width and color
- automatic filling of areas with any flat tint
- automatically-drawn geometric shapes and frames: rectangles, circles, ovals, etc
- creation of masks in the form of linework images

Page assembly

- display of full-color images for positioning on page
- eyes-on assembly with the trackball, dial, and soft-key pad
- placement subject to movement, rotation, and sizing while you watch
- instantaneous adjustments using the built-in Scitex microprocessors
- mask position and dimensions adjustable during assembly



- on-line library of page grids and blue lines for rapid page assembly
- computer accuracy in fitting images to page grids and blue lines
- computer-aided drawing for creating masks on screen
- sophisticated automatic masking, isolating items by their color contrast
- cropping and scaling
- graded tints and other computer-generated backgrounds
- overlaying and ghosting of linework and process-color pictures

Print specifications

- undercolor removal
- registration marks, trim marks, and printer guides
- computer-aided page imposition

Output on the Scitex ERAY Laser

- resolutions up to 100 points per millimeter (2500 lines per inch)
- exposures of up to A0 size (86 by 122 centimeters, 34 by 48 inches)
- 6 minutes typical exposure time for four A4 separations (210 by 330 millimeters, 8 5/8 by 11 inches) at 72 points per millimeter (1600 lines per inch)
- choice of any mesh at conventional screen angles
- unconventional screen angles available if desired
- electronically screened exposure on lith or rapid-access films
- square, round, elliptical, or pincushion screen-dots
- exposure directly onto special offset plates
- one to four separations exposed together
- unscreened exposures on continuous-tone films

Work coordination

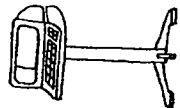
- high-speed STC magtapes for fast library/archive handling
- simultaneous triple-tasking, scanning, correction/page-assembly, and output
- flexible backup with three computers
- system command dialogue at alphanumeric terminals
- all data electronically accessible to all stations without hand-carrying
- magnetic discs for on-line memory, transfer, and short-term storage

The Multi-Workstation Response Network

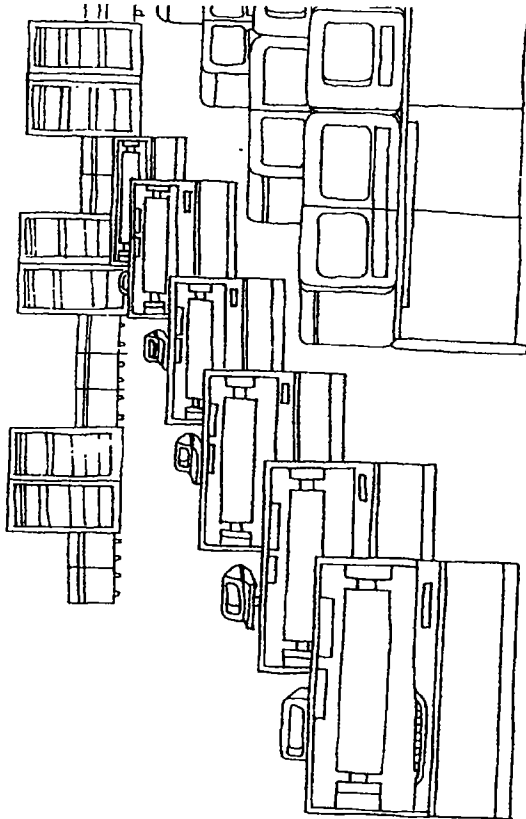
*A complete large-scale pre-press
department. Scitex's top processors
linked for optimal control of
high-volume production.*



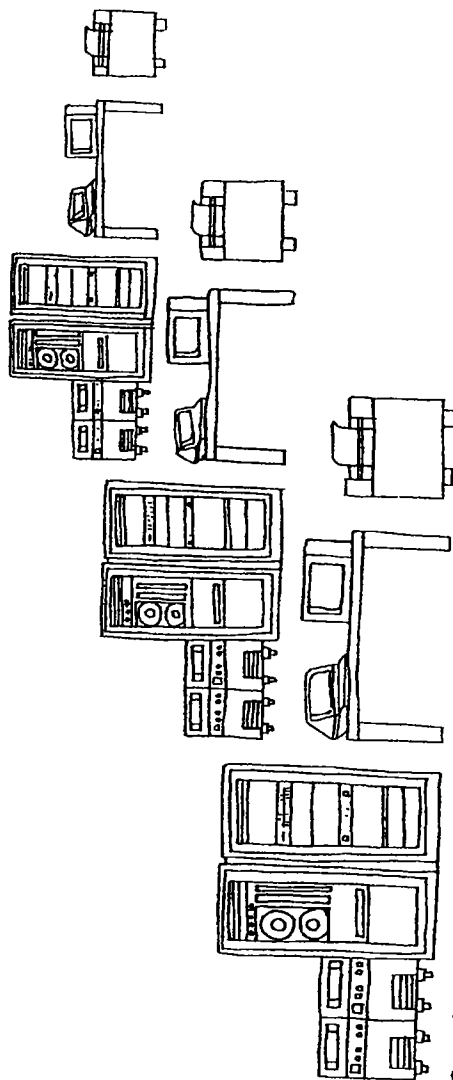
Typesetters



Input



Color and Page Editing



Supervision